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National Early Warning Score (NEWS): Medical Surgical Unit Pilot, Electronic Hospital-Wide Roll-Out, and Unit Educational Case Studies

BACKGROUND

- Failure to rescue identifies hospitalized patients who experienced negative outcomes because a deterioration in status was not recognized
- The Institute for Health Care Improvement, “early warning systems should be used to monitor all patients in the acute care setting and allow for:”
 - Early recognition of deterioration
 - Ensure timely escalation of care
- Most hospitalized patients who experienced a cardiopulmonary arrest exhibited a change in clinical parameters in the hours preceding the arrest
- Early warning systems provide clear criteria, prompt nurses to score the patient, and take prescribed action to address patients’ needs

Score	3	2	1	0	1	2	3
Respiration Rate	≤8		9-11	12-20		21-24	≥25
Oxygen Saturation	≤91	92-93	94-95	≥96			
Any Supplemental O2		Yes		No			
Temperature	≤95°F		95.1-96.8°F	96.9-100.4°F	100.5-102.2°F	≥ 102.3	
Systolic Blood Pressure	≤ 89	90-100	101-110	111-219			≥ 220
Heart Rate	≤ 40		41-50	51-90	91-110	111-130	≥ 131
Level of Consciousness				Alert			Voice, pain or Unresponsive

LOCAL CONTEXT

- St Joseph Hospital (SJO) did not use an *early warning system* (EWS) score to alert the bedside nurse or MET (medical emergency team)
- 22% of St. Joseph code blues occurred outside the ICU for FY 2018
- The purpose of this EBP project was to implement a EWS scoring system and reduce the number of code blue events outside of ICU

METHODS

- Design: Evidence-based practice
 - Setting: St Joseph Hospital Med/Surg Units
 - Participants: RN staff and review of NEWS Scores
- Procedure:
- Following pilot completion the *early warning system* (EWS) was introduced and implemented hospital-wide
 - Code Blue and MET data reviewed post-education and roll-out to determine correct utilization of EWS and initiation of appropriate actions
 - Unit-specific case studies were developed for Code Blue patients for whom the NEWS was not done/ done incorrectly but would have warranted a call to the MET team
 - Case studies sent to the individual unit managers to disseminate and discuss at their unit focus. MET team was also sent case studies to review. Case studies presented at February 2021 Nursing Grand Rounds.

LIMITATIONS

- Hospital-wide roll-out on February 17, 2020. COVID-19 outbreak started shortly after, altering the unit census, nursing priorities, and patient population
- Case study education was done in October 2020, followed by a second COVID-19 surge
- Data was only evaluated over three month time spans

REFERENCES

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RESULTS AND OUTCOMES

- General Surgery Pilot: 50% reduction in Code Blues
- 2020 hospital-wide rollout did not result in reduction in code blue events in med-surg units
- March-May 2020 review demonstrated opportunities to improve documentation in NEWS scoring. 62% records of should have resulted in a call to the MET RN
- After case study education, 3-months analyzed and compared to the 2019 Code Blue data:
 - 34.8% reduction in code blues
 - 12% of codes occurring outside of the ICU
 - 46% of code blue cases did not have a NEWS score completed in the 4 hours prior to the code
 - 40% had no NEWS documented
 - 26% had a NEWS score > 5 that was not reported to MET
 - 26% of the code blues demonstrated proper NEWS scoring and proper interventions

IMPLICATIONS FOR PRACTICE

- Review Early Warning Score in Epic and how MET Team and the unit plans on using them

DISCUSSION

- There was a reduction in code blue calls following the NEWS case study education roll-out
- Nursing compliance with the NEWS scoring system increased following case study education
- More education could have led to greater compliance and proper intervention. A fully automated system would have helped with nursing compliance